



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW2037 BYPASS RATIO: 6.0  
UNIQUE ID NUMBER: 1PW039 PRESSURE RATIO ( $\pi_{oo}$ ): 26.9  
COMBUSTOR:  
ENGINE TYPE: TF RATED THRUST ( $F_{oo}$ ) (kN): 167.3

REGULATORY DATA \*\* DATA SUPERSEDED \*\* SEE FOLLOWING UID FOR REVISED DATA: 4PW072

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	4.9	39.3	55.8	14.7
AS % OF ORIGINAL LIMIT	24.8	33.3	59.4	71.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			74.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			89.9	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			102.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			122.0	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
- DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	1.538	0.05	0.40	31.10	
CLIMB OUT	85	2.2	1.266	0.06	0.41	24.80	
APPROACH	30	4.0	0.399	0.21	2.30	10.30	
IDLE	7	26.0	0.141	2.26	23.10	4.40	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			547	530	5396	8107	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				3.2	32.0	48.1	11.4
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.9
TEMPERATURE (K)	298
ABS HUMIDITY (kg/kg)	

### FUEL

SPEC	Jet A
H/C	1.89-1.91
AROM (%)	

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: P&WA  
TEST LOCATION: X-8 Stand, PWA, East Hartford, CT  
TEST DATES: 08/08/1983-10/08/1983

### REMARKS

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)